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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,804	10/24/2001	Diane M. Landers	DP-301830	8712
22851	7590	07/18/2005	EXAMINER	
DELPHI TECHNOLOGIES, INC.			CRAIG, DWIN M	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			2123	

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/075,804		LANDERS ET AL.	
	Examiner		Art Unit	
	Dwin M. Craig		2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/25/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-187 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-187 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Examiner Dwain Craig is currently the Examiner of record. Examiner Eduardo Garcia-Otero is no longer the Examiner of record.
2. Claims 1-187 have been presented for Examination based on Applicants' Request for Continued Examination under 37 CFR 1.114 of the Application.

Response to Arguments

3. Applicants' arguments presented in the 4/25/2005 responses have been fully considered. The Examiner's response is as follows.

- 3.1 Regarding the Applicants' response to the Examiner's 35 USC 112 enablement rejections of claims 1-187.

Applicant argued on pages 23 and 24 of the 4/25/2005 responses, "Capturing these instructions in a spreadsheet is not pertinent to knowledge based systems." The Examiner respectfully traverses this argument. The Examiner notes the following from page 52 of Applicants' specification, "*The Manufacturing rules may include, but not be limited to, manufacturing rules, speeds, feed rates or tolerances, and the like as well as combinations of the foregoing.*" Applying manufacturing rules including speeds and feed rates and/or tolerances, as would be applied when converting from a simulated model to the actual machine tool instruction is an example of an Expert System. The Examiner respectfully notes that using "rules" does imply using an expert system as objective evidence teaches, **US Patent 5,874,955** Rogowitz et al. (Col. 1 line 18, *A typical prior art rule based, e.g. an "expert system", is shown in FIG. 1.*) Further, the Examiner respectfully notes that the *Rogowitz et al.* reference discloses "spread sheet" Col. 2 lines 53-57 with a "*rules based system*" and for use with a

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CAD/CAM environment, Col. 7 lines 20-21. After careful review of Applicants' specification and a review of the prior art, the Examiner has determined that the claimed limitation of *"capturing manufacturing process rules in a spread sheet"* is enabled by the description on page 52 of Applicants' specification and figures 6 and 7. The Examiner withdraws the 35 USC § 112 1st paragraph rejections of claims 1-187.

3.2 Regarding the Applicants' response to the 35 USC § 112-second paragraph rejections of claims 1-187, Applicants' argued, *on page 25 of the 4/25/2005 responses, "An associative relationship merely indicates that there is a link between the two elements. It need not be so narrowly interpreted as being positional only as the Examiner appears to suggest."* The Examiner has found this argument to be persuasive and withdraws the earlier 35 USC § 112-second paragraph rejections of claims 1-187.

3.3 Regarding the Applicants' response to the 35 USC § 103(a) rejections of claims 1-187, Applicants' argued *on page 35 of the 4/25/2005 response, "The cited reference merely provides suggestions as to important considerations with respect to assembly relationships without providing any teaching what so ever as to the methodology of modeling as the Applicants have done."* And on page 38 Applicant argued, *"That is, the cited reference is clear recognition that the existing modeling and assembly methods are highly vertical, and subject to the limitation that establishment of certain relationships would result in difficulties when modification were in order."* The Examiner has found these arguments in combination with the special definition of what a *Horizontally* structured CAD/CAM method is provided on pages 3 & 4 of the specification, to be persuasive. *(See also figures 4 & 9 for an illustration of the Horizontal Method of CAD/CAM.)*

Drawings

4. Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. *See page 10 lines 6 & 7 of the Applicant's specification.* See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

5. Claims 153-187 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 119-152. When two groups of claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-187 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-78 of US Patent No. 6,775,581 in view of US Patent 5,874,955 Rogowitz et al.

6.1 *For Example*, both claim 1 of pending US Patent Application 10/075,804 and claim 1 of US Patent 6,775,581 claim, a horizontally structured CAD/CAM modeling method, and selecting a blank, and establishing a coordinate system, and creating a master process model, and a virtual blank, and virtual machining of said manufacturing feature into said virtual blank and generating machine instructions.

However, claim 1 of US Patent 6,775,581 does not expressly disclose capturing manufacturing rules in a spread sheet. The Examiner notes that data or rules are stored in a *tabular* format when stored in a spreadsheet.

The *Rogowitz et al.* reference teaches capturing process rules in a spread sheet (Figure 1 and Figure 5 and Col. 2 lines 53-56, for use with CAD/CAM schematics (Col. 7 lines 20-21).

It would have been obvious, to one of ordinary skill in the CAD/CAM art to have modified the teachings of the US Patent 6,775,581 with the teachings of the *Rogowitz et al.* reference because, the teachings disclosed in the *Rogowitz et al.* reference provide an improved method of performing “*what if*” experiments (Col. 3 lines 66-67 & Col. 4 lines 1-14) in a guided manner which allows for increased productivity (Col. 4 lines 62-67 & Col. 6 lines 1-7).

Allowable Subject Matter

7. Claims 1-187 are allowed. The following is an Examiner's reasons for allowance. The following limitations, in combination with other limitations are neither anticipated nor made obvious over the prior art, "*A method of horizontally structured CAD/CAM automated manufacturing*" in combination with "*associative relationship with said coordinate system.*"

The Examiner notes that in Figures 4, 5 and 6 and on pages 3 & 4 of the specification the Applicant has provided a "*special definition*" of what the term "*horizontal*" CAD/CAM manufacturing is defined to be. More specifically, the Examiner notes that this method of manufacturing requires the "*Virtual blank*" modeled element be in reference to a "*coordinate*" system as opposed to the prior art methods of "*vertical*" CAD/CAM where the object was modified in reference to itself. It is noted by the Examiner that the cited claims are still rejected under the non-statutory Judicially created doctrine of obvious type double patenting and that claims 119-187 are being objected to.

Conclusion

8. **Claims 1-187** are rejected. This Office Action is **Non-Final**.

8.1 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 5,808,893 teaches a method of simulating a CAD Subsystem (Figure 4) for use with a CNC machine (Col. 1 lines 9-13) and storing the data in a tabular format (Col. 3 lines 29-37).

US Patent 6,134,338 teaches a method of converting CAD data from symbolic format into tabular format, for a spread-sheet (Figure 1B and Figure 2).

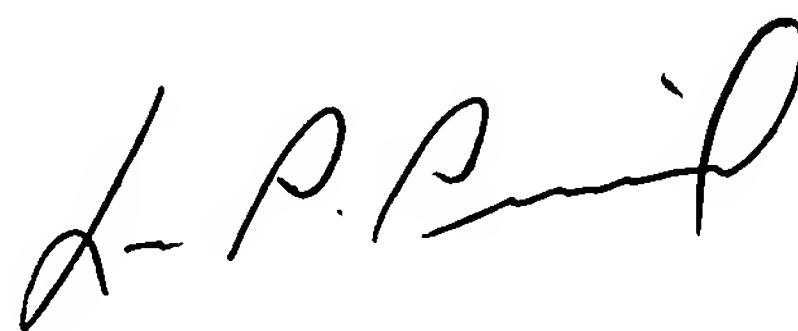
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8.2 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC



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